

United States Department of Agriculture Natural Resources Conservation Service

Ecological Site Description

Site Type: Rangeland

Site Name: Wetland (WL), 15-19" P.Z., Foothills and Mountains West

Site ID: R043BY278WY

Major Land Resource Area: 43B-Central Rocky Mountains

Physiographic Features

This site occurs on level or gently-sloping land near springs, seeps or sloughs.

Landform: drainageways, oxbows, and stream terraces.

Aspect: N/A

	<u>Minimum</u>	<u>Maximum</u>	
Elevation (feet):	5600	8300	
Slope (percent):	0	10	(mostly <3%)
Water Table Depth (inches):	0	18	
Flooding:			
Frequency:	occasional	frequent	
Duration:	very brief	brief	
Ponding:			
Depth (inches):	0	12	
Frequency:	frequent	frequent	
Duration:	brief	very long	
Runoff Class:	negligible	high	

Climatic Features

Annual precipitation ranges from 15-19 inches per year. Wide fluctuations may occur in yearly precipitation and result in more dry years than those with more than normal precipitation. Temperatures show a wide range between summer and winter and between daily maximums and minimums. This is predominantly due to the high elevation and dry air, which permits rapid incoming and outgoing radiation. Cold air outbreaks in winter move rapidly from northwest to southeast and account for extreme minimum temperatures. Extreme storms may occur during the winter, but most severely affect ranch operations during late winter and spring.

Prevailing winds are from the southwest, and strong winds are less frequent than over other areas of Wyoming. Occasional storms, however, can bring brief periods of high winds with gusts exceeding 50 mph.

Growth of native cool season plants begins about May 15 and continues to about August 15.

The following information is from the "Jackson" climate station:

Site Type: Rangeland
MLRA: 43B-Central Rocky Mountains

Wetland (WL) 15-19W
R043BY278WY

	<u>Minimum</u>	<u>Maximum</u>	<u>5 yrs. out of 10 between</u>
Frost-free period (days):	12	60	July 9 – August 12
Freeze-free period (days):	42	100	June 20 – August 26

Annual Precipitation (inches): <11.98 >19.69 (2 years in 10)

Mean annual precipitation: 17.00 inches

Mean annual air temperature: 38.9°F (23.3°F Avg. Min. to 54.5°F Avg. Max.)

For detailed information visit the Natural Resources Conservation Service National Water and Climate Center at <http://www.wcc.nrcs.usda.gov/cgibin/state.pl?state=wy> website. Other climate stations representative of this precipitation zone include "Afton" in Lincoln County; and "Darwin Ranch" in Teton County.

Influencing Water Features

Wetland Description:	<u>System</u>	<u>Subsystem</u>	<u>Class</u>	<u>Sub-class</u>
	Palustrine	None	Emergent Wetland	Persistent

Stream Type: C (Rosgen)

Representative Soil Features

The soils of this site are deep and poorly drained with a water table above the surface for part, but not all, of the growing season. They are nearly level to slightly depressional areas with poor surface drainage. Surface textures range from moderately coarse to fine, but commonly are medium and moderately fine with dark color and high organic content.

Major Soil Series correlated to this site include: Cora, Newfork, and phases of the Bear Lake, Moslander, and Tepete series.

Parent Material Kind: alluvium

Parent Material Origin: mixed

Surface Texture: loam, clay loam, silty clay loam, thin peat layers common

Surface Texture Modifier: gravelly

Subsurface Texture Group: loam, clay loam, fine sandy loam, sandy clay loam

Surface Fragments ≤ 3" (% Cover): 0-20

Surface Fragments > 3" (%Cover): 0-5

Subsurface Fragments ≤ 3" (% Volume): 0-40

Subsurface Fragments > 3" (% Volume): 0-15

	<u>Minimum</u>	<u>Maximum</u>
Drainage Class:	very poorly	poorly
Permeability Class:	slow	moderate
Depth (inches):	20	>60
Electrical Conductivity (mmhos/cm) ≤20":	0	8
Sodium Absorption Ratio ≤20":	0	5
Soil Reaction (1:1 Water) ≤20":	6.1	8.4
Soil Reaction (0.1M CaCl2) ≤20":	5.6	7.3
Available Water Capacity (inches) ≤30":	2.25	6.0
Calcium Carbonate Equivalent (percent) ≤20":	0	15

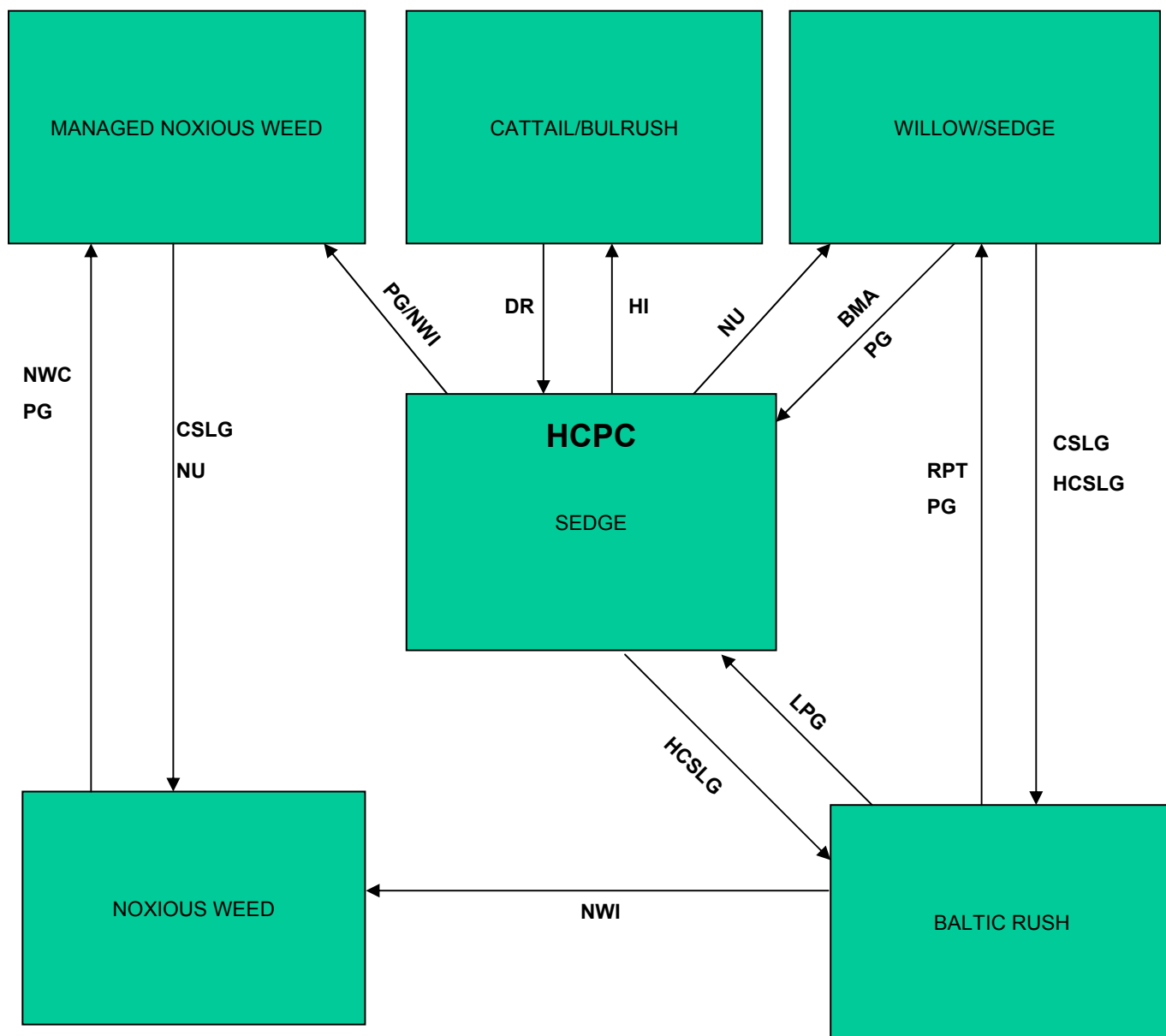
Plant Communities

Ecological Dynamics of the Site:

As this site deteriorates, species such as Baltic rush, and weedy forbs increase. Grasses and grass-like plants such as Nebraska sedge, bluejoint reedgrass, and tufted hairgrass will decrease in frequency and production. Willows and water birch, when present, will lose density and age diversity with heavy browsing. This site is vulnerable to noxious weed invasion by species such as Canada thistle.

The Historic Climax Plant Community (description follows the plant community diagram) has been determined by study of rangeland relic areas, or areas protected from excessive disturbance. Trends in plant communities going from heavily grazed areas to lightly grazed areas, seasonal use pastures, and historical accounts have also been used.

The following is a State and Transition Model Diagram that illustrates the common plant communities (states) that can occur on the site and the transitions between these communities. The ecological processes will be discussed in more detail in the plant community narratives following the diagram.



BMA – Brush Management (all methods)
 BMC – Brush Management (chemical)
 BMF – Brush Management (fire)
 BMM – Brush Management (mechanical)
 CSP – Chemical Seedbed Preparation
 CSLG – Continuous Season-long Grazing
 DR – Drainage
 CSG – Continuous Spring Grazing
 HB – Heavy Browse
 HCSLG – Heavy Continuous Season-long Grazing
 HI – Heavy Inundation
 LPG – Long-term Prescribed Grazing
 MT – Mechanical Treatment (chiseling, ripping, pitting)

NF – No Fire
 NS – Natural Succession
 NWC – Noxious Weed Control
 NWI – Noxious Weed Invasion
 NU – Nonuse
 P&C – Plow & Crop (including hay)
 PG – Prescribed Grazing
 RPT – Re-plant Trees
 RS – Re-seed
 SGD – Severe Ground Disturbance
 SHC – Severe Hoof Compaction
 WD – Wildlife Damage (Beaver)
 WF – Wildfire

Plant Community Composition and Group Annual Production
Reference Plant Community (HCPC)

COMMON NAME/GROUP NAME	SCIENTIFIC NAME	SYMBOL	Annual Production (Normal Year)		
			Group	lbs./acre	% Comp.
			Total: 6000		
GRASSES AND GRASS-LIKES					
GRASSES/GRASSLIKES					
tufted hairgrass	Deschampsia caespitosa	DECA18	1	1200 - 1800	20 - 30
Nebraska sedge	Carex nebrascensis	CANE2	2	1200 - 1800	20 - 30
bluejoint reedgrass	Calamagrostis canadensis	CACA4	3	600 - 900	10 - 15
MISC. GRASSES/GRASSLIKES			4	600 - 1200	10 - 20
alpine timothy	Phleum alpinum	PHAL2	4	0 - 300	0 - 5
American mannagrass	Glyceria grandis	GLGR	4	0 - 300	0 - 5
baltic rush	Juncus balticus	JUBA	4	0 - 300	0 - 5
Bearded wheatgrass	Elymus scribneri	ELSC4	4	0 - 300	0 - 5
bentgrasses	Agrostis spp.	AGROS2	4	0 - 300	0 - 5
big bluegrass	Poa ampla (syn. P.secunda)	POAM(POSE)	4	0 - 300	0 - 5
blue wildrye	Elymus glaucus	ELGL	4	0 - 300	0 - 5
Bulrushes	Scirpus spp.	SCIRP	4	0 - 300	0 - 5
Cattails	Typha spp.	TYPHA	4	0 - 300	0 - 5
inland sedge	Carex interior	CAIN11	4	0 - 300	0 - 5
Little barley	Hordeum pusillum	HOPU	4	0 - 300	0 - 5
Nodding brome	Bromus porteri	BRPO2	4	0 - 300	0 - 5
Northern reedgrass	Calamagrostis stricta ssp. inexpansa	CASTI3	4	0 - 300	0 - 5
Reed canarygrass	Phalaris arundinacea	PHAR3	4	0 - 300	0 - 5
Rushes, other	Juncus spp.	JUNCU	4	0 - 300	0 - 5
Sedges, other	Carex spp.	CAREX	4	0 - 300	0 - 5
Shortawn foxtail	Alopecurus aequalis	ALAE	4	0 - 300	0 - 5
Spikerushes	Eleocharis spp.	ELEOC	4	0 - 300	0 - 5
tall mannagrass	Glyceria elata (syn. G. striata)	GLEL	4	0 - 300	0 - 5
Water sedge	Carex aquatilis ssp. aquatilis	CAAQA	4	0 - 300	0 - 5
other perennial grasses (native)		2GP	4	0 - 300	0 - 5
FORBS			5	300 - 900	5 - 15
American bistort	Polygonum bistortoides	POBI6	5	0 - 300	0 - 5
American licorice	Glycyrrhiza lepidota	GLLE3	5	0 - 300	0 - 5
arrowgrass	Triglochin spp.	TRIGL	5	0 - 300	0 - 5
Bedstraw	Galium spp.	GALIU	5	0 - 300	0 - 5
bluebell	Mertensia spp.	MERTE	5	0 - 300	0 - 5
blue-eyed grass	Sisyrinchium spp.	SISYR	5	0 - 300	0 - 5
buttercup	Ranunculus spp.	RANUN	5	0 - 300	0 - 5
cinquefoil (herbaceous)	Potentilla spp.	POTEN	5	0 - 300	0 - 5
clover	Trifolium spp.	TRIFO	5	0 - 300	0 - 5
cow parsnip	Heracleum maximum	HEMA80	5	0 - 300	0 - 5
elephanthead (lousewort)	Pedicularis groenlandica	PEGR2	5	0 - 300	0 - 5
Fireweed	Chamerion angustifolium (syn. Epilobium angustifolium)	CHAN9	5	0 - 300	0 - 5
Gentian	Gentiana spp.	GENTI	5	0 - 300	0 - 5
Groundsel	Packera spp.	PACKE	5	0 - 300	0 - 5
Hawkweed	Hieracium spp.	HIERA	5	0 - 300	0 - 5
horsetail (scouringrush)	Equisetum spp.	EQUIS	5	0 - 300	0 - 5
Iris (Rocky Mountain)	Iris missouriensis	IRMI	5	0 - 300	0 - 5
Mint (wild)	Mentha arvensis	MEAR4	5	0 - 300	0 - 5
Ragwort (groundsel)	Senecio spp.	SENEC	5	0 - 300	0 - 5
shooting star	Dodecatheon spp.	DODEC	5	0 - 300	0 - 5
Smartweed (knotweed)	Polygonum spp.	POLYG4	5	0 - 300	0 - 5
Sneezeweed, orange (rubberweed)	Hymenoxys spp.	HYMEN7	5	0 - 300	0 - 5
violet	Viola spp.	VIOLA	5	0 - 300	0 - 5
Water hemlock (spotted)	Cicuta maculata var. angustifolia	CIMAA	5	0 - 300	0 - 5
waterleaf	Hydrophyllum spp.	HYDRO4	5	0 - 300	0 - 5
Yellow (mountain) sneezeweed	Helenium autumnale	HEAU	5	0 - 300	0 - 5
other perennial forbs (native)		2FP	5	0 - 300	0 - 5
TREES/SHRUBS					
willows	Salix spp.	SALIX	6	300 - 600	5 - 10
MISC. SHRUBS			7	60 - 600	1 - 10
Alpine laurel (bog kalmia)	Kalmia microphylla	KAMI	7	0 - 300	0 - 5
currant	Ribes spp.	RIBES	7	0 - 300	0 - 5
Dogwood	Cornus spp.	CORNU	7	0 - 300	0 - 5
water birch	Betula occidentalis	BEOC2	7	0 - 300	0 - 5
woods rose	Rosa woodsii var. woodsii	ROWOW	7	0 - 300	0 - 5

This list of plants and their relative proportions are based on near normal years. Fluctuations in species composition and relative production may change from year to year dependent upon precipitation or other climatic factors.

Plant Community Narratives

Following are the narratives for each of the described plant communities. These plant communities may not represent every possibility, but they probably are the most prevalent and repeatable plant communities. The plant composition tables shown above have been developed from the best available knowledge at the time of this revision. As more data is collected, some of these plant communities may be revised or removed, and new ones may be added. None of these plant communities should necessarily be thought of as "Desired Plant Communities". According to the USDA NRCS National Range and Pasture Handbook, Desired Plant Communities (DPC's) will be determined by the decision-makers and will meet minimum quality criteria established by the NRCS. The main purpose for including any description of a plant community here is to capture the current knowledge and experience at the time of this revision.

Sedge Plant Community (HCPC)

The interpretive plant community for this site is the Historic Climax Plant Community. This state evolved with grazing by large herbivores and is well suited for grazing by domestic livestock. Potential vegetation is estimated at 65% grasses or grass-like plants, 15% forbs, and 20% woody plants. The major grasses and grass-like plants include Nebraska sedge, tufted hairgrass, and bluejoint reedgrass. Other grasses and grass-like plants that may occur on this site include alpine timothy, tall and American mannagrass, Baltic rush, bearded wheatgrass, bentgrasses, big bluegrass, blue wildrye, inland sedge, nodding brome, northern reedgrass, and other wetland sedge species. Willows are the major woody species. Other woody species may include woods rose, bog kalmia, currant and water birch.

A typical plant composition for this state consists of Nebraska sedge 20-30%, tufted hairgrass 20-30%, bluejoint reedgrass 10-15%, other grasses and grass-like plants 10-20%, perennial forbs 5-15%, willows 5-10%, and up to 10% other woody plants. Ground cover, by ocular estimate, varies from 85-100%.

The total annual production (air-dry weight) of this state is about 6000 pounds per acre, but it can range from about 5500 lbs./acre in unfavorable years to about 7500 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:

Growth curve number: WY0203

Growth curve name: 15-19W, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	0	10	40	30	15	5	0	0	0

(Monthly percentages of total annual growth)

The state is well adapted to the Central Rocky Mountains climatic conditions. It is a critical state providing water and habitat for the surrounding area. The diversity in plant species provides a variety of habitats for wildlife. It is resistant to drought due to a dependable water supply. This is a sustainable plant community (site/soil stability, watershed function, and biologic integrity).

Transitions or pathways leading to other plant communities are as follows:

- Heavy Inundation (flooding) will convert this plant community to the *Cattail/Bulrush State*.
- Nonuse will convert this plant community to the *Willow/Sedge State*.
- Heavy Continuous Season-long Grazing will convert this plant community to the *Baltic Rush State*.
- Noxious Weed Invasion with Prescribed Grazing will convert this plant community to the *Managed Noxious Weed State*.

Cattail/Bulrush Plant Community

This plant community is a result of heavy inundation or flooding conditions. Bulrushes occupy the wettest site with cattails surrounding. Willows may be present near the dryer edges of this state as well as reed canary grass.

The total annual production (air-dry weight) of this state is about 5500 pounds per acre, but it can range from about 5000 lbs./acre in unfavorable years to about 7000 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:

Growth curve number: WY0203

Growth curve name: 15-19W, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	0	10	40	30	15	5	0	0	0

(Monthly percentages of total annual growth)

The state is stable and protected from excessive erosion. The biotic integrity of this plant community is usually intact, however forage value will decrease and wildlife values will shift toward different species. The watershed is functioning.

Transitional pathways leading to other plant communities are as follows:

- Drainage will result in a plant community very similar to the *Historic Climax Plant Community (Sedge State)*.

Willow/Sedge Plant Community

This plant community results from nonuse. Willows increase and often will inhibit herbaceous forage availability by creating a physical barrier to livestock. Nebraska sedge, Water sedge, beaked sedge, and dogwood are often present in the protected understory.

The total annual production (air-dry weight) of this state is about 5500 pounds per acre, but it can range from about 5000 lbs./acre in unfavorable years to about 7000 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:

Growth curve number: WY0203

Growth curve name: 15-19W, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	0	10	40	30	15	5	0	0	0

(Monthly percentages of total annual growth)

The state is very stable and protected from excessive erosion. The biotic integrity of this plant community is intact. The watershed is functioning.

Transitional pathways leading to other plant communities are as follows:

- Brush Management followed by deferment for 1 to 2 years as part of a Prescribed Grazing plan will result in a plant community very similar to the *Historic Climax Plant Community (Sedge State)*. Care should be taken when planning brush management to consider wildlife habitat and critical winter ranges.
- Heavy Continuous Season-long Grazing or Continuous Season-long Grazing will convert this plant community to the *Baltic Rush State*.

Managed Noxious Weed Plant Community

This plant community is the result of noxious weed control and prescribed grazing. Grazing is used as a tool to control introduced and noxious weeds by timing use during the flowering of the identified weed such as Canada thistle. Other weed control efforts such as chemical, mechanical, or biological methods are employed in conjunction with a grazing management scheme. The native plant community responds to this management by increasing in production and vigor, however it is very sensitive to any management change that allows the seed production and increase of noxious weeds such as nonuse or overuse. Noxious weeds are still present, but in smaller amounts and may be isolated to exposed or bare ground areas such as sandbars.

The total annual production (air-dry weight) of this state is about 5000 pounds per acre, but it can range from about 4000 lbs./acre in unfavorable years to about 6000 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:

Growth curve number: WY0203

Growth curve name: 15-19W, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	0	10	40	30	15	5	0	0	0

(Monthly percentages of total annual growth)

Bare ground is minimal. The soil of this state is moderately protected. Degraded stream banks may still erode, but increased amounts of deep-rooting sedges provide adequate stability to the system. The biotic community has been compromised, but is relatively stable and at risk due to invasive plants. The watershed is functioning, but is at risk of degrading rapidly with the introduction of improper management techniques.

Transitional pathways leading to other plant communities are as follows:

- Nonuse OR Continuous Season-long Grazing will convert this plant community to the *Noxious Weed State*.

Baltic Rush Plant Community

This plant community evolved under heavy continuous season-long grazing by domestic livestock. Species such as Baltic rush, inland sedges, horsetails, American licorice, elephanthead, and Rocky Mountain iris often dominate this site. Introduced species such as Garrison creeping meadow foxtail, smooth brome, and clovers often invade. Willows are greatly diminished and lack a diversity of age classes.

The total annual production (air-dry weight) of this state is about 4000 pounds per acre, but it can range from about 3000 lbs./acre in unfavorable years to about 5000 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:

Growth curve number: WY0203

Growth curve name: 15-19W, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	0	10	40	30	15	5	0	0	0

(Monthly percentages of total annual growth)

The state is vulnerable to downcutting and excessive erosion. The biotic integrity of this plant community is at risk due to the replacement of deep rooted wetland species with shallow rooted forbs and introduced species. The watershed is at risk from downcutting activity.

Transitional pathways leading to other plant communities are as follows:

- Long-term Prescribed Grazing will result in a plant community very similar to the *Historic Climax Plant Community (Sedge State)*.
- Replanting Trees followed by several years of rest as part of a Prescribed Grazing plan will convert this plant community to the *Willow/Sedge State*.
- Noxious Weed Invasion will convert this plant community to the *Noxious Weed State*.

Noxious Weed Plant Community

This plant community is the result of continuous grazing or nonuse accompanied by noxious weed invasion. Species such as Canada thistle, arrowgrass, and water hemlock dominate this state.

The total annual production (air-dry weight) of this state is about 3000 pounds per acre, but it can range from about 2000 lbs./acre in unfavorable years to about 4000 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:

Growth curve number: WY0203

Growth curve name: 15-19W, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	0	10	40	30	15	5	0	0	0

(Monthly percentages of total annual growth)

Bare ground has increased. The soil of this state is not well protected. Degraded stream banks may erode. The watershed is at risk and may produce excessive runoff. The biotic community is at risk due to invasive plants.

Transitional pathways leading to other plant communities are as follows:

- Noxious Weed Control with Prescribed Grazing will convert this plant community to the *Managed Noxious Weed State*.

Ecological Site Interpretations

Animal Community – Wildlife Interpretations

Sedge Plant Community (HCPC): This plant community is very important for most wildlife in the area. Over 80% of all wildlife use this site to fulfill some part of their habitat needs. It provides forage and thermal and hiding cover for mule deer, elk, and moose. It provides nesting habitat for shorebirds, songbirds, and waterfowl as well as ground nesting birds such as harriers. The lush herbaceous material produces insects for sage grouse brood rearing and foraging. Dense ground cover provides escape cover, forage, and breeding areas for small mammals which draw predators such as raptors, red fox and coyote. Other birds that would frequent this plant community include red-wing blackbirds, sandhill cranes, western meadowlarks, neo-tropical migrants, and golden eagles.

Cattail/Bulrush Plant Community: This plant community may be beneficial for the same wildlife that would use the Historic Climax Plant Community. However, the plant community composition is less

diverse, and thus, less apt to meet the seasonal needs of these animals. Red-wing blackbird and sandhill crane habitat is excellent.

Willow/Sedge Plant Community: This plant community is beneficial for the same wildlife that would use the Historic Climax Plant Community. However, dominance of woody species may improve thermal and hiding cover for all species, especially structural diversity needed for neo-tropical migrants, as well as provide more foraging areas for moose.

Managed Noxious Weed Plant Community: This plant community may be beneficial for the same wildlife that would use the Historic Climax Plant Community. However, the plant community composition is less diverse, and thus, less apt to meet the seasonal needs of these animals. It may provide some foraging opportunities for sage grouse when it occurs proximal to woody cover due to enhanced insect populations.

Baltic Rush Plant Community: This plant community may be beneficial for some of the same wildlife that would use the Historic Climax Plant Community. However, the woody component is typically less productive and unable to support large browsers such as moose. As woody plants decrease, structural diversity is lost for neo-tropical migrants, cover decreased for deer and elk, and nesting for shrub-nesting birds is impacted. It may provide some brood rearing and foraging opportunities for sage grouse when it occurs proximal to woody cover.

Noxious Weed Plant Community: This plant community is less diverse, and thus, less able to meet the habitat needs of many wildlife. Herbaceous forage and cover is not as dense and will aid in successful predation of nesting birds, therefore improving habitat for predators such as raptors, red fox, and coyote. It may provide some brood rearing and foraging opportunities for sage grouse when it occurs proximal to woody cover.

Animal Preferences (Quarterly - 1,2,3,4) for commonly occurring plants in MLRA 43B, 15-19W

COMMON NAME/GROUP NAME	SCIENTIFIC NAME	SYMBOL	Cattle	Sheep	Horses	Mule Deer	Antelope	Elk	Moose
GRASSES/GRASSLIKES									
Alkali bluegrass	<i>Poa juncea</i> (syn. to <i>P. secunda</i>)	POJU	DDDD	PPPP	DDDD	PPPP	PPPP	DDDD	DDDD
Alkali muhly	<i>Muhlenbergia asperifolia</i>	MUAS	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Alkali sacaton	<i>Sporobolus airoides</i>	SPAI	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Alpine timothy	<i>Phleum alpinum</i>	PHAL2	PPPP	PPPP	PPPP	DDDD	UUUU	PPPP	DDDD
American manna grass	<i>Glyceria grandis</i>	GLGR	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD	DDDD
Baltic rush	<i>Juncus balticus</i>	JUBA	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD	UUUU
Basin wildrye	<i>Leymus cinereus</i>	LEC4	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP	DDDD
Beaked sedge	<i>Carex rostrata</i>	CAR06	DDUD	UUUU	DDUD	UUUU	UUUU	DDUD	DDUD
Bearded wheatgrass	<i>Elymus trachycaulus</i> ssp. <i>subsecundus</i>	ELTRS	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Bentgrass	<i>Agrostis</i> spp.	AGROS2	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Big bluegrass	<i>Poa ampla</i> (syn. to <i>Poa secunda</i>)	POAM	PPPP	DDDD	PPPP	PPPP	PPPP	PPPP	PPPP
Blue wildrye	<i>Elymus glaucus</i>	ELGL	PPPP	DDDD	PPPP	DDDD	UUUU	PPPP	DDDD
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	FSSP6	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP	DDDD
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>	CACA4	PPPP	DDDD	PPPP	UUUU	UUUU	PPPP	DDDD
Bottlebrush squirreltail	<i>Elymus elymoides</i>	ELELE	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	NNNN
Bulrush	<i>Scirpus</i> spp.	SCIRP	DDDD	UUUU	UUUU	UUUU	UUUU	DDDD	DDDD
California oatgrass	<i>Danthonia californica</i>	DACA3	PPPP	DDDD	DDDD	DDDD	DDDD	PPPP	DDDD
Canby bluegrass	<i>Poa canbyi</i> (syn. to <i>Poa secunda</i>)	POCA	PPPP	DPDD	DPDD	DPDD	DPDD	PPPP	DPDD
Cattail	<i>Typha</i> spp.	TYPHA	DUUD	DUUD	DUUD	DUUD	DUUD	DUUD	DUUD
Columbia needlegrass	<i>Achnatherum nelsonii</i>	ACNE9	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Cusick bluegrass	<i>Poa cusickii</i>	POCU3	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Dunehead sedge	<i>Carex phaeocephala</i>	CAPH2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Fowl bluegrass	<i>Poa palustris</i>	POPA2	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Green needlegrass	<i>Nassella viridula</i>	NAV14	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Idaho fescue	<i>Festuca idahoensis</i>	FEID	DDPD	DDPD	DDPD	DDDD	DDDD	DDPD	DDDD
Indian ricegrass	<i>Achnatherum hymenoides</i>	ACHY	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Inland saltgrass	<i>Distichlis spicata</i>	DISP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Inland sedge	<i>Carex interior</i>	CAIN11	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD	DDDD
Letterman needlegrass	<i>Achnatherum lettermanii</i>	ACLE9	UPUU	UUUU	UPUU	DDDD	DDDD	DDDD	DDDD
Little barley	<i>Hordeum pusillum</i>	HOPU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Mat muhly	<i>Muhlenbergia richardsonis</i>	MURI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Montana wheatgrass	<i>Elymus albicans</i>	ELAL7	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Mountain brome	<i>Bromus marginatus</i>	BRMA4	PPPP	PPPP	DDDD	DDDD	NNNN	PPPP	DDDD
Mountain muhly	<i>Muhlenbergia montana</i>	MUMO	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Mutton bluegrass	<i>Poa fendleriana</i>	POFE	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Nebraska sedge	<i>Carex nebrascensis</i>	CANE2	PPPP	PPPP	PPPP	PPPP	DDDD	PPPP	DDDD
Needleleaf sedge	<i>Carex duriuscula</i>	CADU6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Nodding brome	<i>Bromus porteri</i>	BRPO2	PPPP	PPPP	DDDD	DDDD	UUUU	PPPP	DDDD
Northern reedgrass	<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>	CAST13	PPPP	DDDD	PPPP	DDDD	UUUU	PPPP	DDDD
Nuttall's alkalgrass	<i>Puccinellia nuttalliana</i>	PUNU2	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
One-spoke oatgrass	<i>Danthonia unispicata</i>	DAUN	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	DDDD
Oniongrass	<i>Melica bulbosa</i>	MEBU	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Prairie junegrass	<i>Koeleria macrantha</i>	KOMA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Pumpelly's brome	<i>Bromus inermis</i> ssp. <i>pumpellianus</i>	BRINP	PPPP	PPPP	DDDD	DDDD	UUUU	PPPP	DDDD
Redtop	<i>Agrostis stolonifera</i>	AGST2	UPDU	UPDU	UPDU	UPDU	UPDU	UPDU	UPDU
Reed canarygrass	<i>Phalaris arundinacea</i>	PHAR3	UDDU	UDDU	UDDU	UDDU	UDDU	UDDU	UDDU
Richardson's needlegrass	<i>Achnatherum richardsonii</i>	ACHRI8	PPPP	PPPP	DDDD	DDDD	DDDD	PPPP	DDDD
Sandberg bluegrass	<i>Poa secunda</i>	POSE	UDDU	UDDU	UDDU	UDDU	UDDU	UDDU	UDDU
Shortawn foxtail	<i>Alopecurus aequalis</i>	ALAE	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Slender wheatgrass	<i>Elymus trachycaulus</i>	ELTR7	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Spikifescue	<i>Leucopoa kingii</i>	LEK12	PPPP	DDDD	PPPP	PPPP	DDDD	PPPP	DDDD
Spikerush	<i>Eleocharis</i> spp.	ELEOC	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Spike trisetum	<i>Trisetum spicatum</i>	TRSP2	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Sun sedge	<i>Carex inops</i> ssp. <i>heliophila</i>	CAINH2	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Tall mannagrass	<i>Glyceria elata</i> (syn. <i>G. striata</i>)	GLEL	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD	DDDD
Thickspike wheatgrass	<i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i>	ELMA7	DPDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Threadleaf sedge	<i>Carex filifolia</i>	CAFI	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Timber oatgrass	<i>Danthonia intermedia</i>	DAIN	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD	DDDD
Tufted hairgrass	<i>Deschampsia caespitosa</i>	DECA18	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP	DDDD
Water sedge	<i>Carex aquatilis</i> ssp. <i>aquatilis</i>	CACA3	UDDU	UDDU	UDDU	UDDU	UDDU	UDDU	UDDU
Western needlegrass	<i>Achnatherum occidentale</i>	ACCOQ	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP	DDDD
Western wheatgrass	<i>Pascopyrum smithii</i>	PASM	DPDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
FORBS									
American licorice	<i>Glycyrrhiza lepidota</i>	GLLE3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
American bistort	<i>Polygonum bistortoides</i>	POB16	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
American vetch	<i>Vicia americana</i>	VIAM	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	DDDD
Arnica	<i>Arnica</i> spp.	ARNIC	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU	UUUU
Arrowgrass	<i>Triglochin</i> spp.	TRIGL	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Asters	<i>Eucephalus & Symphyotrichum</i> spp.	EUCEP2/SYMPH4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Avens (prairie smoke)	<i>Geum</i> spp.	GEUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Balsamroot	<i>Balsamorhiza</i> spp.	BALSA	DPDD	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Bedstraw	<i>Galium</i> spp.	GALIU	UUUU	DDDD	UUUU	DDDD	DDDD	DDDD	UUUU
Biscuitroot	<i>Lomatium</i> spp.	LOMAT	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD	DDDD
Bitterroot	<i>Lewisia rediviva</i> ssp. <i>rediviva</i>	LERER	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Bluebell	<i>Mertensia</i> spp.	MERTE	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Blue-eyed grass	<i>Sisyrinchium</i> spp.	SISYR	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Buckwheat	<i>Eriogonum</i> spp.	ERIOG	UUUU	DDDD	UUUU	UUUU	UUUU	UUUU	UUUU
Buttercup	<i>Ranunculus</i> spp.	RANUN	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Cinquefoil (herbaceous)	<i>Potentilla</i> spp.	POTEN	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Clover	<i>Trifolium</i> spp.	TRIFO	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Columbine	<i>Aquilegia</i> spp.	AQUIL	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Cow parsnip	<i>Hieracium maximum</i>	HERAC	PPPP	PPPP	PPPP	PPPP	PPPP	DDDD	NNNN
Daisy	<i>Townsendia</i> spp.	TOWNS	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Deathcamas	<i>Zigadenus venenosus</i>	ZIVE	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Elephanthead lousewort	<i>Pedicularis groenlandica</i>	PEGR2	UUUU	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD
Elk thistle	<i>Cirsium foliosum</i>	CIFO	UUUU	UUUU	UDPU	UUUU	UUUU	UDPU	UUUU
Evening-primrose	<i>Oenothera</i> spp.	OENOT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Fireweed	<i>Chamerion angustifolium</i>	CHAN9	PPPP	DDDD	UUUU	PPPP	DDDD	PPPP	PPPP
Flax	<i>Linum</i> spp.	LINUM	UPDU	UPDU	UPDU	UPDU	UPDU	UPDU	UPDU
Fleabane	<i>Erigeron</i> spp.	ERIGE2	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Gentian	<i>Gentiana</i> spp.	GENTI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Geranium	<i>Geranium</i> spp.	GERAN	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Gilia	<i>Gilia</i> spp.	GILIA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenaster	<i>Heterotheca</i> spp.	HETER8	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenpea	<i>Thermopsis</i> spp.	THERM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenrod	<i>Solidago</i> spp.	SOLID	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Golden smoke	<i>Corydalis aurea</i>	COAU2	TTUU	TTUU	TTUU	TTUU	TTUU	TTUU	TTUU
Goldenweed, stemless	<i>Stenotus acutis</i> ssp. <i>acutis</i>	STACA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Green gentian	<i>Frasera speciosa</i>	FRSP	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Groundsel	<i>Packera</i> spp.	PACKE	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Harebell (bellflower)	<i>Campanula</i> spp.	CAMPA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Hawksbeard	<i>Crepis</i> spp.	CREPI	UUUU	PPPP	UUUU	DDDD	DDDD	UUUU	DDDD
Hawkweed	<i>Hieracium</i> spp.	HIERA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Horsemint	<i>Agastache</i> spp.	AGAST	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD	DDDD
Horsetail (scouring rush)	<i>Equisetum</i> spp.	EQUIS	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Iris (Rocky Mountain)	<i>Iris missouriensis</i>	IRMI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU

Animal Preferences (Quarterly - 1,2,3,4) for commonly occurring plants in MLRA 43B, 15-19W

COMMON NAME/GROUP NAME	SCIENTIFIC NAME	SYMBOL	Cattle	Sheep	Horses	Mule Deer	Antelope	Elk	Moose
Larkspur (poisonous in spring before flowering)	Delphinium spp.	DELPH	DTDD	DTDD	DTDD	DTDD	DTDD	DTDD	DTDD
Little sunflower	Helianthus pumilus	HEPU3	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Locoweed	Oxytropis spp.	LXTR	TTUU	TTUU	TTUU	TTUU	TTUU	TTUU	TTUU
Lupine (may be poisonous after seedpots mature)	Lupinus spp.	LUPIN	DDTT	DDTT	DDTT	DDTT	DDTT	DDTT	DDTT
Meadow-rue	Thalictrum occidentale	THOC	DDDD	PPPP	DDDD	PPPP	PPPP	DDDD	PPPP
Milkvetch	Astragalus spp.	ASTRA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Minerscandle	Cryptantha spp.	CRYPT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Mint (wild)	Mentha arvensis	MEAR4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Monkeyflower	Mimulus spp.	MIMUL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Monkshood	Aconitum spp.	ACONI	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Mountain dandelion	Agoseris spp.	AGOSE	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	DDDD
Mule-ears	Wyethia amplexicaulis	WYAM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Mustard	Draba spp.	DRAB4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Nailwort	Paronychia spp.	PARON	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Onion (wild)	Allium spp.	ALLI4	DPDD	PPPP	DPDD	DPDD	PPPP	DPDD	DPDD
Oregon grape	Mahonia repens	MARE11	UUUU	DDDD	UUUU	PPPP	DDDD	DDDD	DDDD
Owl's-clover	Orthocarpus spp.	ORTHO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Paintbrush	Castilleja spp.	CAST	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Peavine	Lathyrus spp.	LATHY	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Penstemon	Penstemon spp.	PENST	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Phacelia	Phacelia spp.	PHACE	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Phlox	Phlox spp.	PHLOX	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Plantain	Plantago spp.	PLANT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Primrose	Primula spp.	PRIMU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Pussytoes	Antennaria spp.	ANTEN	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Ragwort (groundsel)	Senecio spp.	SENEC	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Sandwort	Arenaria spp.	ARENA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Shooting star	Dodecatheon spp.	DODEC	DDDD	DDDD	UUUU	DDDD	UUUU	UUUU	UUUU
Starwort	Stellaria spp.	STELL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Sego lily	Calochortus nuttallii	CANU3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Smartweed (knotweed)	Polygonum spp.	POLYG4	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU	UUUU
Sneezeweed, orange (rubberweed)	Hymenoxys spp.	HYMEN7	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Springbeauty	Claytonia spp.	CLAYT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Stinging nettle	Urtica dioica	URDI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Stonecrop	Sedum spp.	SEDUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Stoneseed	Lithospermum spp.	LITHO3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Sunflower	Helianthus spp.	HELIA3	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Sweetroot	Osmorhiza spp.	OSMOR	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Toadflax	Comandra umbellata	COUMP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Valerian (tobacco root)	Valeriana spp.	VALER	DDDD	PPPP	DDDD	DDDD	DDDD	DDDD	DDDD
Violet	Viola spp.	VIOLA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Water hemlock (spotted)	Cicuta maculata var. angustifolia	CIMAA	TTUU	TTUU	TTUU	TTUU	TTUU	TTUU	TTUU
Waterleaf	Hydrophyllum spp.	HYDR04	DDDD	DDDD	DDDD	PPPP	DDDD	DDDD	DDDD
Western coneflower	Rudbeckia occidentalis	RUOC2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Wild strawberry (false strawberry)	Fragaria vesca	FRVE	DDDD	PPPP	DDDD	PPPP	PPPP	DDDD	DDDD
Yarrow (common & western)	Achillea millefolium	ACMI2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Yellowbell	Fritillaria pudica	FRPU2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Yellow sneezeweed	Helenium autumnale	HEAU	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
TREES, SHRUBS & HALF-SHRUBS									
Alpine laurel (bog kalmia)	Kalmia microphylla	KAMI	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Antelope bitterbrush	Purshia tridentata	PUTR2	PPPP	PPPP	DDDD	PPPP	PPPP	PPPP	PPPP
Aspen	Populus tremuloides	POTR5	DDDD	DDDD	DDDD	PPPP	DDDD	PPPP	PPPP
Basin big sagebrush	Artemisia tridentata ssp. tridentata	ARTR1	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Big sagebrush	Artemisia tridentata	ARTR2	UUUU	DDDD	UUUU	PPPP	PPPP	DDDD	DDDD
Black sagebrush	Artemisia nova	ARN04	DDDD	PPPP	UUUU	DDDD	DDDD	DDDD	DDDD
Chokecherry (toxic in large amounts)	Prunus virginiana	PRVI	DTDD	DTDD	DDDD	PPPP	UUUU	DDDD	PPPP
Current	Ribes spp.	RIBES	DDDD	DDDD	DDDD	PPPP	UUUU	DDDD	DDDD
Dogwood	Cornus spp.	CORNU	DDDD	DPDD	DDDD	DPDD	DDDD	DPDD	DPDD
Early (alkali) sage	Artemisia arbuscula ssp. longiloba	ARALR	UUUU	UUUU	UUUU	PPPP	PPPP	UUUU	UUUU
Elderberry	Sambucus spp.	SAMBU	DDDD	DDDD	UUUU	PPPP	UUUU	DDDD	DDDD
Fringed sagewort	Artemisia frigida	ARFR4	UUUU	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU
Goldenweed, shrubby	Ericameria suffruticosa	ERSU13	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Greaseweed (toxic in large amounts)	Sarcobatus vermiculatus	SAVE4	UUUU	DDDD	UUUU	DDDD	DDDD	UUUU	UUUU
Green (low) rabbitbrush	Chrysothamnus viscidiflorus	CHV18	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Juniper, common	Juniperus communis var. depressa	JUCOD	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Juniper, Rocky Mountain	Juniperus scopulorum	JUSC2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Limber pine	Pinus flexilis	PIFL2	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
Low sagebrush	Artemisia arbuscula ssp. arbuscula	ARAR8	UUUU	DDDD	UUUU	DDDD	DDDD	UUUU	UUUU
Mountain big sagebrush	Artemisia tridentata ssp. vaseyana	ARTRV	UUUU	DDDD	UUUU	DDDD	DDDD	UUUU	UUUU
Mountain mahogany	Cercocarpus spp.	CERCO	PPPP	PPPP	DDDD	PPPP	UUUU	PPPP	PPPP
Raspberry	Rubus idaeus	RUID	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU	DDDD
Rubber rabbitbrush	Ericameria nauseosa	ERNA10	UUUU	PPPP	UUUU	DDDD	PPPP	DDDD	DDDD
Serviceberry	Amelanchier alnifolia	AMAL2	DDDD	PPPP	UUUU	PPPP	DDDD	DDDD	DDDD
Shrubby cinquefoil	Dasiphora floribunda	DAFL3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Silverberry	Elaeagnus commutata	ELCO	UUUU	DDDD	UUUU	UUUU	DDDD	UUUU	PPPP
Silver sagebrush	Artemisia cana	ARCA13	UUUU	DDDD	UUUU	PPPP	PPPP	DDDD	DDDD
Snowberry (western)	Symphoricarpos occidentalis	SYOC	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU	UUUU
Snowbrush ceanothus	Ceanothus velutinus	CEVE	UUUU	DDDD	UUUU	DDDD	UUUU	DDDD	UUUU
Spiked big sagebrush	Artemisia tridentata ssp. spiciformis	ARTRS2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Thimbleberry	Rubus parviflorus	RUPA	UUUU	DDDD	UUUU	UUUU	UUUU	UUUU	DPDD
Three-tip sagebrush	Artemisia tripartita	ARTR4	UUUU	DDDD	UUUU	UUUU	DDDD	UUUU	DDDD
True mountainmahogany	Cercocarpus montanus	CEMO2	PPPP	PPPP	DDDD	PPPP	UUUU	PPPP	PPPP
Water birch	Betula occidentalis	BEOC2	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Wild rose	Rosa woodsii var. woodsii	ROWOW	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD	DDDD
Willow, Bebb's	Salix bebbiana	SABE2	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, Blueberry	Salix myrtillofolia	SAMY	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, Booth's	Salix boothii	SABO2	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, coyote (sandbar)	Salix exigua	SAEX	PPPP	PPPP	DDDD	PPPP	UUUU	PPPP	PPPP
Willow, Drummond's	Salix drummondiana	SADR	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, grayleaf	Salix glauca	SAGL	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, Geyer's	Salix geyeriana	SAGE2	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, Lemmon's	Salix lemmonii	SALE	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, peachleaf	Salix amygdaloides	SAAM2	PPPP	PPPP	DDDD	PPPP	UUUU	PPPP	PPPP
Willow, planeleaf (diamondleaf)	Salix planifolia	SAPL2	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, pussy	Salix discolor	SADI	DDDD	DDDD	DDDD	DDDD	UUUU	DDDD	DDDD
Willow, Scouler's	Salix scouleriana	SASC	PPPP	PPPP	DDDD	PPPP	DDDD	PPPP	PPPP
Willow, short-fruit (barrenground)	Salix brachycarpa	SABR	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, tweedy	Salix tweedyi	SATW	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, whiplash	Salix lucida ssp. Caudata	SALUC	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, interior	Salix interior	SAIN3	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, wolf	Salix woffii	SAWO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	DDDD
Willow, yellow	Salix lutea	SALU2	PPPP	PPPP	DDDD	PPPP	UUUU	PPPP	PPPP
Wyoming big sagebrush	Artemisia tridentata ssp. wyomingensis	ARTRW8	UUUU	DDDD	UUUU	PPPP	PPPP	UUUU	UUUU

N = not used; U = undesirable; D = desirable; P = preferred; T = toxic

Animal Community – Grazing Interpretations

The following table lists suggested stocking rates for cattle under continuous season-long grazing under normal growing conditions. These are conservative estimates that should be used only as guidelines in the initial stages of the conservation planning process. Often, the current plant composition does not entirely match any particular plant community (as described in this ecological site description). Because of this, a field visit is recommended, in all cases, to document plant composition and production. More precise carrying capacity estimates should eventually be calculated using this information along with animal preference data, particularly when grazers other than cattle are involved. Under more intensive grazing management, improved harvest efficiencies can result in an increased carrying capacity. If distribution problems occur, stocking rates must be reduced to maintain plant health and vigor.

Plant Community	Production (lb./ac)	Carrying Capacity* (AUM/ac)
Sedge (HCPC)	5500-7500	2.0
Cattail/Bulrush	5000-7000	1.8
Willow/Sedge	5000-7000	1.7
Managed Noxious Weed	4000-6000	1.6
Baltic Rush	3000-5000	1.3
Noxious Weed	2000-4000	.9

* - Continuous, season-long grazing by cattle under average growing conditions.

Grazing by domestic livestock is one of the major income-producing industries in the area. Rangeland in this area may provide yearlong forage for cattle, sheep, or horses. During the dormant period, the forage for livestock use needs to be supplemented with protein because the quality does not meet minimum livestock requirements.

Hydrology Functions

Climate is the principal factor limiting forage production on this site. This site is dominated by soils in hydrologic group D. Infiltration rate is very slow and runoff potential high for the soils of this site due to a high water table and saturated soil conditions. However, high forage production on this site diminishes runoff potential as long as site is managed for maintaining adequate residual vegetation. (Refer to Part 630, NRCS National Engineering Handbook for detailed hydraulic information).

Rills and gullies should not typically be present. Water flow patterns may be present if associated with a perennial flowing stream. Litter typically falls in place, and signs of movement are not common unless associated with a perennial flowing stream. Chemical and physical crusts are rare to non-existent.

Recreational Uses

This site provides a variety of hunting and fishing opportunities as well providing popular camping areas for recreationists when not saturated. Waterfowl hunting opportunities exist when associated with open water. The wide variety of plants which bloom from spring until fall have esthetic values that appeal to visitors.

Wood Products

No appreciable wood products are present on the site.

Other Products

Supporting Information

Associated Sites

Subirrigated	R043BY274WY
Saline Subirrigated	R043BY242WY

Similar Sites

R034AY278WY – Wetland (WL) 10-14W has lower production.
R043BY274WY – Subirrigated (Sb) 15-19W has a lower water table and lower production.

Inventory Data References (narrative)

Information presented here has been derived from NRCS clipping data and other inventory data. Field observations from range trained personnel were also used. Those involved in developing this site include: Bill Christensen, Range Management Specialist, NRCS; Karen Clause, Range Management Specialist, NRCS; and Everet Bainter, Range Management Specialist, NRCS. Other sources used as references include: USDA NRCS Water and Climate Center, USDA NRCS National Range and Pasture Handbook, and USDA NRCS Soil Surveys from various counties.

Inventory Data References

<u>Data Source</u>	<u>Number of Records</u>	<u>Sample Period</u>	<u>State</u>	<u>County</u>
SCS-RANGE-417	58	1966-1986	WY	Lincoln & others

State Correlation

Type Locality

Field Offices

Lyman, Cokeville, Afton, Jackson, Pinedale

Relationship to Other Established Classifications

Other References

Site Description Approval

State Range Management Specialist

Date